

DOCKET NO. D-1997-046-4

DELAWARE RIVER BASIN COMMISSION

**Nestle Waters North America Inc.
Spring Water Withdrawal Project
Arrowhead Springs
Millcreek Township, Lebanon County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an application submitted by Nestle Waters North America Inc. (NWNA) to the Delaware River Basin Commission (DRBC or Commission) on March 26, 2009 with amendments submitted on July 18, 2012 and January 25, 2013 for renewal of an allocation of spring water and review of a spring water withdrawal project (Application). The project was previously approved by Docket No. D-1997-046-3 on September 24, 2008. The project was approved by the Pennsylvania Department of Environmental Protection (PADEP) on Sept 24, 2008 (Public Water Supply Permit No. 3396420).

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Lebanon County Planning Commission has been notified of the pending action on this docket. A public hearing on this project was held by the DRBC on March 5, 2013.

A. DESCRIPTION

1. Purpose. The purpose of this project is for approval to continue the withdrawal allocation of up to 9.3 million gallons per month (mgm) of spring water from Spring Nos. 1 and 3 at Arrowhead Springs for the purpose of water bottling and to temporarily divert a maximum of 2.232 mgm of Spring No. 3 overflow to supply the docket holder's trout hatchery house. This docket also approves a modification to the passby flow requirement and removal of DS Waters of America, Inc. (DSW) as a co-docket holder.

2. Location. The spring water withdrawal project is located in the Mill Creek Watershed in Millcreek Township, Lebanon County, Pennsylvania. The project is underlain by the Richland and Leithsville geologic formations. Mill Creek in the area of the project site is designated by PADEP as a Trout Stocked Fishery (TSF).

Specific location information has been withheld for security reasons.

3. **Area Served.** Water derived from Spring Nos. 1 and 3 will be conveyed by truck to NWNA water bottling facility located in Breinigsville, Lehigh County, Pennsylvania, for distribution throughout the docket holder's customer distribution base. Water derived from Spring Nos. 1 and 3 may also be sold to DSW for conveyance by truck to the DSW water bottling facility located in West Earl Township, Lancaster County, Pennsylvania for distribution throughout the DSW customer distribution base.

A portion of overflow from Spring No. 3 is directed year-round through the hatchery house. Water from Spring Nos. 2, 4, 5, and 6 also located on the site, flows through the trout hatchery in-stream, unenclosed raceways and ponds located at the Arrowhead Springs project site. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. **Physical features.**

a. **Design criteria.** Six springs (Spring Nos. 1 through 6) emanate from the Arrowhead Springs property. Discharge from the springs flows generally northward through the existing, small-scale trout hatchery located on the property and on to the East Branch Mill Creek (hereinafter referred to as Mill Creek). The trout hatchery consists of a series of man-made, unenclosed, in-stream ponds and raceways, holding trout in different stages of development. The in-stream ponds and raceways are man-made modifications of various braided channels formed downstream from the spring discharge locations at the site. Water withdrawn from Spring Nos. 1 and 3 is used for bottled water supply. NWNA projects their 10-year demand including any water that may be sold to DS Waters, will be satisfied with their current allocation of 9.3 mgm.

A portion of overflow from Spring No. 3 (50 gpm) is directed year-round through the hatchery house to supply trout eggs, fry, and fingerling with a steady flow of spring water. This water flows through the hatchery house and is released to the head of three in-line ponds that ultimately flow into Mill Creek. The allocation of 2.232 mgm of overflow from Spring No. 3 should be sufficient for the needs of the hatchery house.

The remaining springs (Spring Nos. 2, 4, 5, and 6) and overflow from Spring Nos. 1 and 3 not captured by the water bottling operation, naturally flow through the in-stream ponds and raceways of the trout hatchery and ultimately to Mill Creek.

b. **Facilities.** Catchments are in place at Spring Nos. 1 and 3 to collect spring water for water bottling purposes. The catchment for Spring No. 1 is a 6' diameter stainless steel, circular, open-bottom tank set in a bed of compacted gravel and sealed off from surface water infiltration with compacted clay. Spring No. 3 is enclosed within a 31' diameter glass-lined steel enclosure constructed of a concrete ring wall that rests on a stone ring wall. Water from Spring No. 3 is conveyed underground by gravity to an on-site treatment, storage, and tanker-truck-load-out building. Water from Spring No. 1 is pumped to a load-out building. Spring water is loaded out after being pumped from temporary storage tanks through 5-micron (nominal) filters and an ultraviolet light disinfection treatment system into a stainless steel tanker truck for transport to the bottling plant(s). The withdrawal from both spring catchments is metered.

The project catchments are above the 100-year flood elevation.

All spring withdrawals are metered.

The water system is not presently interconnected with any other water system.

B. FINDINGS

Background

Initial development of the Arrowhead Springs Trout Hatchery occurred in the 1960s and was expanded with additional in-stream raceways and ponds until the 1980s. The trout hatchery was operated as a recreational fee fishing business open to the public from the 1960s until 2007.

Docket No. D-1997-046-2 (May 25, 2005) issued to DSW authorized the withdrawal of up to 9.0 million gallons during any 30 day period from Spring Nos. 1 and Spring No. 3 located on the Arrowhead Springs Farm in Millcreek Township, Lebanon County, PA. At the time of approval of the DRBC Docket, the Arrowhead Springs Farm property was owned by Ludwig Associates, a Pennsylvania general partnership. The Ludwigs and their predecessor owners of the property had previously entered into a Water Supply Agreement with DSW allowing the installation and use of spring water collection and loadout facilities on the Arrowhead Springs property for use in supplying water to the DSW water bottling facility in Lancaster and Ephrata, Pennsylvania. In June, 2007, Nwana acquired ownership of the Arrowhead Springs Farm property from the Ludwigs. For a period of time after that acquisition (specifically, until June 30, 2012), DSW continued to retain certain rights to withdraw water from Spring Nos. 1 and 3 for use at the DSW bottling facilities pursuant to an amended and restated Water Supply Agreement between DSW and Nwana. This joint use of Arrowhead Springs by Nwana and DSW was recognized in DRBC Docket No. D-1997-046-3, approved September 30, 2008. Shortly after the acquisition of the Arrowhead Property, Nwana closed the recreational fee fishing business. The trout hatchery facilities were then leased to a local trout hatchery operator in early 2008. The hatchery is now being operated as a small-scale wholesale trout hatchery business. DSW will no longer be a co-docket holder for the project, although Nwana may as it sees fit, sell water to DSW for conveyance by truck to the DSW water bottling facility located in West Earl Township, Lancaster County, Pennsylvania for distribution throughout the DSW customer distribution base.

Passby Flow, Monitoring, and Reporting

A stream flow monitoring program and passby requirement was established in Docket No. D-1997-046-3 for this project. In amended application materials submitted on July 18, 2012 and January 25, 2013, Nwana requested that DRBC consider adjustment of the DRBC Docket No. D-1997-046-3 passby flow condition based on new information and more recent analyses that indicate that the assumptions made in developing the prior passby flow values were not supported by currently available data.

1. Background of Passby Flow Condition

Condition C.II.f of DRBC Docket D-1997-046-3 (approved September 30, 2008) established a two-tiered passby flow condition. That passby flow condition read:

f. The project withdrawal must not cause the streamflow to be less than 1.45 mgd at the Arrowhead Springs project line. Whenever the streamflow beyond the Arrowhead Springs site is less than this amount, a withdrawal of 0.1 mgd may be made and the remaining natural stream flow must be allowed to pass. Notwithstanding the above, no withdrawal shall be made and the entire natural flow must be allowed to pass if streamflow is less than 0.1 mgd, the estimated seven-consecutive-day low flow in a 10-year return period (Q7-10 flow). The docket holder shall continue to monitor and report passby flow annually as stipulated in the "Operations & Flow Monitoring Plan", dated June 30, 1998 (revised January 18, 1999). Any change in the Operating Plan shall be approved by the Executive Director of the DRBC.

Thus, Condition C.II.f provided a multi- staged passby flow trigger:

- (1) no withdrawals may be made when stream flows at the Arrowhead Springs property line are less than 0.1 mgd;
- (2) a withdrawal of 100,000 gpd may be made when stream flows are between 0.1 mgd and 1.45 mgd;
- (3) a withdrawal of 300,000 gpd may be made so long as resulting net stream flows at the Arrowhead Spring property line equal or exceed 1.45 mgd. (As a corollary, when natural stream flow without withdrawals is between 1.45 and 1.75 mgd, the rate of withdrawal must be reduced such that 1.45 mgd is allowed to pass the property line.)

The new information and more recent analyses that NRNA provided to the Commission indicates that the passby flow recommendation was based upon:

- 1) an assumption of a much larger contributing watershed at the passby flow compliance point than is in fact the case. The watershed area drained by the streams emanating from the Arrowhead Springs property using the watershed delineation tool in the USGS StreamStats program (<http://water.usgs.gov/osw/streamstats/pennsylvania.html>) indicates that the actual watershed area at the current passby flow point of compliance is 1.05 square miles not 3.84 square miles as was previously calculated.
- 2) assumed vs. actual flow characteristics. The average daily flow ("ADF") for the previously calculated 3.84 square mile East Branch Mill Creek watershed was approximately 6.41 cfs, and this value was apparently plugged into the Pennsylvania/Maryland In-stream Flow Model (PIFM) to calculate habitat loss as a result of withdrawals. Based on actual data collected at Arrowhead for the period of record from May 1999 to March 2012, the ADF of the watershed at the Arrowhead Springs property boundary is approximately 4.27 cfs.

2. PIFM Model Assumptions and Outputs

NRNA submitted updated runs of the PIFM model considering a range of trout species and life stages, at the current passby flow compliance point (watershed area = 1.05 square miles) and an ADF of 4.27 cfs based on the nearly 13-year record at Arrowhead. In each evaluation, the stream is classified as ridge and valley limestone ("R&V Limestone") and the assumed withdrawal value is 300,000 gpd. The results of predicted habitat loss at the current tier 1 passby flow of

0.155 cfs (the previously estimated 0.1 mgd 7Q10 value) for various trout species is less than the 10% annual habitat loss which is acceptable for a Class B or C trout stream, or a stocked CWF (Cold Water Fishery) stream. Considering that the Mill Creek watershed is being managed as a trout stocked fishery, and not as an EV, EQ or Class A wild trout stream, the above values should be more than acceptable.

Considering the nature of the species at the passby point of compliance, the corrected watershed value, and the results of the updated PIFM runs, it is apparent that a passby flow equal to the minimum 100,000 gpd (0.155 cfs) value would be more than sufficient to protect the fishery in this situation. Nwana asserted that the second tier passby flow regime established in the 2008 Docket is overly stringent and not necessary to protect the downstream fish habitat.

Nwana acknowledged the statements made in the PFBC's 1998 letter indicating that a flow of 400 gpm is needed for the downstream fish hatchery's use, and Nwana could accept a second tier passby flow value equal to 400 gpm (576,000 gpd or 0.891 cfs). However, further evaluation of actual flow data to calculate lowest flow over a period of 7 days analogous to the 7Q10 flow (seven-day low flow over a period of 10 years) for the watershed indicated that 7-day average total flow would reach an annual low once every 10 years of 1.28 mgd or less. As shown by the PIFM modeling results previously provided in Nwana's July 18, 2012 letter to DRBC, a passby flow of 1.28 mgd is well above the minimum flow required to limit habitat loss for trout species to less than 10% in this system. As such, Nwana requested that the DRBC consider changing the current pass-by flow from 1.45 mgd to 1.28 mgd. As the DRBC generally bases minimum passby flows for water withdrawals on the 7Q10 calculated for the point of compliance on a stream, the requested reduction in passby flow was granted. The modified passby flow condition is described in condition C.II.f. of the Decision Section of this docket and reads as follows:

- f. The project withdrawal must not cause the streamflow to be less than 1.28 mgd at the Arrowhead Springs passby monitoring compliance point and daily withdrawal rates shall be reduced as appropriate to ensure that the withdrawal does not result in flow less than 1.28 mgd at the monitoring compliance point. Whenever the streamflow at the passby flow monitoring compliance point is equal to or less than this amount, no withdrawal shall be made and the entire natural flow must be allowed to pass. Within three months of the date of approval of this Docket (June 6, 2013) the docket holder shall submit a modified Operation Plan which reflects the modifications included in this docket.

Consumptive Use and Exportation

The DRBC estimates that the project withdrawals, used for the purpose of water bottling result in a consumptive use of 100 percent of the total water use. The DRBC estimates that the project withdrawals, used for the purpose of providing flow to the hatchery house result in a negligible consumptive use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the Administrative Manual – Part III – Basin Regulations – Water Supply Charges.

Former Docket Nos. D-1997-046-1 through D-1997-046-3 issued for the Arrowhead Springs Facility included the approval for the exportation and 100% consumptive use of up to 9.3 mgm of spring water withdrawn from Spring Nos. 1 and 3. Spring water is exported from the Delaware River Basin (DRB) to the Susquehanna River Basin (SRB) in the case where water

is sold to DSW as it is transported to their bottling plant located outside of the DRB. Spring water transported to the Nwana bottling facility remains within the basin until it is bottled, at which time it is difficult to track the ultimate disposition of the water as it is distributed for commercial sale.

Other

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

I. Effective on the approval date for Docket No. D-1997-046-4 below, Docket No. D-1997-046-3 is terminated and replaced by Docket No. D-1997-046-4

II. The project and appurtenant facilities as described in the Section A “Physical features” are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its Public Water Supply permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s. The docket holder shall register with and report to the PADEP all surface and ground water sources described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

b. The springs and operational records shall be available at all times for inspection by the DRBC.

c. The spring withdrawals shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

d. During any month, the combined withdrawal from all spring sources for water bottling purposes shall not exceed 9.3 million gallons. During any month, the diversion from Spring 3 to the trout hatchery house shall not exceed 2.232 million gallons.

e. For purposes of Resolution No. 74-6, as amended, the water withdrawn from the spring catchments for water bottling purposes is classified by DRBC as "surface water" (although it may be classified as groundwater for purposes of FDA and PADEP regulations). As such, the docket holder shall pay for surface water use in accordance with the provisions of Resolution No. 74-6, as amended.

f. The project withdrawal must not cause the streamflow to be less than 1.28 mgd at the Arrowhead Springs passby monitoring compliance point and daily withdrawals shall be reduced as appropriate to ensure that the withdrawal does not result in flow less than 1.28 mgd at the monitoring compliance point. Whenever the streamflow at the passby flow monitoring compliance point is equal to or less than this amount, no withdrawal shall be made and the entire natural flow must be allowed to pass. Within three months of the date of approval of this Docket (June 6, 2013) the docket holder shall submit a modified Operation Plan which reflects the modifications included in this docket.

g. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.

h. Each new water service connection shall include a water meter in accordance with the DRBC's Resolution No. 87-7 (Revised).

i. The docket holder shall implement to the satisfaction of the PADEP, the continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the PADEP on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

j. No water service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

k. The docket holder shall continue to implement its Water Conservation Plan as approved by PADEP, and shall report to the PADEP on actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

l. The docket holder shall implement to the satisfaction of the PADEP, a drought or other water supply emergency plan.

m. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams from any new facilities or repair related construction.

n. No new water service connections shall be made to premises connected to sewerage systems which are not in compliance with all applicable effluent limits contained in State permits and the *Water Quality Regulations* of the Commission.

o. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

p. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

q. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

r. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

s. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing uses of ground or surface water, or if the docket holder receives a complaint by any existing ground or surface water users within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by any ground or surface users within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

t. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive

Director's judgment such modification or suspension is required to protect the water resources of the Basin.

u. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

v. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

BY THE COMMISSION

APPROVAL DATE: March 6, 2013

EXPIRATION DATE: March 6, 2023